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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

John E. Maloney and Robert J. Anderson

Confirmation No.: 7782

Application No.: 10/748,367

Group Art Unit: 2681

Filing Date: December 30, 2003

Examiner: Not Yet Assigned

For: TDOA/GPS HYBRID WIRELESS LOCATION SYSTEM

DATE OF DEPOSIT: May 14, 2004

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

Michael D. Stein

TYPED NAME: **Michael D. Stein**
REGISTRATION NO.: **34,734**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or

before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

☐ In accordance with § 1.129(a), this Information Disclosure Statement is being filed in connection with ☐ the first or ☐ second After Final Submission, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

☐ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.

☒ Copies of references listed on the attached Form PTO-1449 are enclosed herewith

EXCEPT THAT

☒ Copies of references listed on the attached Form PTO 1449 (1-42) are not required to be submitted pursuant to the June 30, 2003 recent revisions to 37 CFR § 1.98(a)(2)(i).

☐ In view of the voluminous nature of references [list as appropriate], and the likelihood that these references are available to the Examiner, copies are not enclosed herewith.

☐ In accordance with § 1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application:


☐ Copies of references [list as appropriate] listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior Application No. _____, filed _____.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-

3050. This form is submitted in duplicate.

- ☐ The relevance of those listed references which are not in the English language is as follows:
- ☒ There are no listed references which are not in the English language.

Date: May 14, 2004


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Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. TPI-0604	Application No. 10/748,367
	Applicant John E. Maloney and Robert J. Anderson	
	Filing Date December 30, 2003	Group 2681
	Confirmation No. 7782	

U. S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass
	1	4,445,118	04/24/84	Taylor et al.	342	357.09
	2	4,483,460	11/20/84	Whelan	221	303
	3	4,728,959	03/01/88	Maloney et al.	342	457
	4	5,045,860	09/03/91	Hodson	342	451
	5	5,317,323	05/31/94	Kennedy et al.	342	457
	6	5,327,144	07/05/94	Stilp et al.	342	387
	7	5,608,410	03/04/97	Stilp et al.	342	387
	8	5,959,580	09/28/99	Maloney et al.	342	457
	9	6,047,192	04/04/00	Maloney et al.	455	456
	10	6,091,362	07/18/00	Stilp et al.	342	465
	11	6,097,336	08/01/00	Stilp	342	357.02
	12	6,101,178	08/08/00	Beal	370	336
	13	6,108,555	08/22/00	Maloney et al.	455	456
	14	6,115,599	09/05/00	Stilp	455	404
	15	6,119,013	09/12/00	Maloney et al.	455	456
	16	6,127,975	10/03/00	Maloney	342	457
	17	6,172,644 B1	01/09/01	Stilp	342	457
	18	6,184,829 B1	02/06/01	Stilp	342	387

EXAMINER	DATE CONSIDERED
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Examiner Initial		Document No.	Date	Name	Class	Subclass	
	19	6,266,013 B1	07/24/01	Stilp et al.	342	387	
	20	6,281,834 B1	08/28/01	Stilp	342	174	
	21	6,285,321 B1	09/04/01	Stilp et al.	342	465	
	22	6,288,675 B1	09/11/01	Maloney	342	457	
	23	6,288,676 B1	09/11/01	Maloney	342	457	
	24	6,317,081 B1	11/13/01	Stilp	342	387	
	25	6,317,604 B1	11/13/01	Kovach, Jr. et al.	455	456	
	26	6,334,059 B1	12/25/01	Stilp et al.	455	456	
	27	6,351,235 B1	02/26/02	Stilp	342	357.06	
	28	6,366,241 B2	04/02/02	Pack et al.	342	442	
	29	6,388,618 B1	05/14/02	Stilp et al.	342	457	
	30	6,400,320 B1	06/04/02	Stilp et al.	342	457	
	31	6,463,290 B1	10/08/02	Stilp et al.	455	456	
	32	6,483,460 B2	11/19/02	Stilp et al.	342	357	
	33	6,492,944 B1	12/10/02	Stilp	342	387	
	34	6,519,465 B2	02/11/03	Stilp et al.	455	456	
	35	6,538,600 B1	03/25/03	Richton et al.	342	357.1	
	36	6,546,256 B1	04/08/03	Maloney et al.	455	456	
EXAMINER				DATE CONSIDERED			

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U. S. PATENT DOCUMENTS							
Examiner Initial		Document No.	Date	Name	Class	Subclass	
	37	6,563,460 B2	05/13/03	Stilp et al.	342	457	
	38	6,603,428 B2	08/05/03	Stilp	342	457	
	39	6,646,604 B2	11/11/03	Anderson	342	465	
	40	6,661,379 B2	12/09/03	Stilp et al.	342	457	
	41	US-2002-0039904-A1	04/04/02	Anderson	455	456.1	
	42	US-2003-0017832-A1	02/23/03	Anderson et al.	455	456.1	
EXAMINER				DATE CONSIDERED			

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		Confirmation No. 7782	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	43	Agarwal, N. et al., "Algorithms for GPS operation indoors and downtown," <i>GPS Solutions</i> , 2002 , 6, 149-160	
	44	Bethel, R.E. et al., "A PDF Multitarget Tracker," <i>IEEE Trans. on AES</i> , 1994 , 30(2), 386-403	
	45	Biacs, Z. et al., "The Qualcomm/SnapTrack Wireless-Assisted GPS Hybrid Positioning System and Results from Initial Commercial Deployments," <i>CDMA Americas Congress 2003 Workshop II: Enhancing 3G Services Offerings with Precision Location-Based Services</i> , Miami, Florida, December 8, 2003 , 7 pages	
*	46	Bugayevskiy, L.M. et al., <i>Map Projections, A Reference Manual</i> , Taylor & Francis, 1995 , Chapters 1 and 5, 1-47 and 155-169	
	47	Srinivasiah, B. et al., "SnapTrack/GTEW/Sprint PCS: GPS-Assisted Location Technology, Alpha Trial Field Test in Tampa, Florida," March 9 – April 2, 1999 , Version 8(F), 1-37	
*	48	Grewal, M.S. et al., <i>Global Positioning Systems, Inertial Navigation and Integration</i> , John Wiley, 2001 , Chapters 1,3, 4, 9, 1-8, 30-102 and 265-290	
	49	Hata, M., "Empirical Formula for Propagation Loss in Land Mobile Radio Services," <i>IEEE Trans. Veh. Tech.</i> , 1980 , VT-29(3), 317-325	
*	50	Hofmann-Wellenhof, B. et al., <i>Global Positioning System, Theory and Practice</i> , 5 th Edition, Springer-Verlag, 1994 , 4, 8 and 10, 39-70, 181-202 and 279-307	
*	51	Snyder, J.P., "Map Projections – A Working Manual," <i>US Geological Survey Professional Paper 1395</i> , US Government Printing Office, 1987 , Chapters 8 and 15, 48-65 and 104-110	
	52	Sorenson, H.W., "Least-Squares Estimation: From Gauss to Kalman," <i>IEEE Spectrum</i> , 1970 , 7, 63-68	
*	53	Van Trees, H.L., <i>Detection, Estimation, and Modulation Theory, Part I</i> , John Wiley & Sons, Inc., 2001 , Chapter 2 (Sections 2.1-2.4), 19-86	
EXAMINER		DATE CONSIDERED	

*If the Examiner would like to receive complete copies of these books, please note that we have them available and would provide upon request.